



Absorptive 4-8GHz Coaxial SP2T Switch

Features

- Wide Band Operation 4-8GHz
- TTL compatible driver include
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request



Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT
Fiber Optics

| Parameters | Min. | Typ. | Max. | Units |
|----------------------------------------|------|--------------------------------|------|--------|
| Frequency Range | | 4-8 | | GHz |
| Insertion Loss | | 1.3 | 1.5 | dB |
| Insertion Loss Temperature Coefficient | | 0.003 | | dB/ °C |
| Isolation | 80 | 85 | | dB |
| Input VSWR | | 1.3 | 1.5 | : 1 |
| Output VSWR | | 1.3 | 1.5 | : 1 |
| RF Input power (CW) | | | 30 | dBm |
| DC Power Dissipation | | 0.5 | | W |
| 0.1dB Compression Point (P0.1dB) | | 30 | | dBm |
| IIP3 | | 44 | | dBm |
| Switching Speed | | 100 Max. | | ns |
| Weight | | 0.7 Max. | | ounces |
| Impedance | | 50 | | Ω |
| Bias Current (+5V/-5V) | | 80/50 Max. | | mA |
| Input / Output Connectors | | SMA - Female | | |
| Finish | | Gold Plated | | |
| Material | | Aluminum | | |
| Sealing | | Hermetically Sealed (Optional) | | |



Absolute Maximum Ratings

| | |
|---------|---------------------|
| Biasing | +5V ± 10%/-5V ± 10% |
|---------|---------------------|

Ordering Information

| Part No. | Description |
|-----------------|------------------------------|
| DBSA0204000800B | SP2T 4-8GHz PIN Diode Switch |

Environmental Specifications

| | |
|-------------------------|----------------------------------------------------------------------------------|
| Operational Temperature | -40°C~+85°C |
| Storage Temperature | -50°C~+105°C |
| Altitude | 30,000 ft. (Epoxy Sealed Controlled environment) |
| | 60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional) |
| Vibration | 25g RMS (15 degrees 2KHz) endurance, 1 hour per axis |
| Humidity | 100% RH at 35°C, 95%RH at 40°C |
| Shock | 20G for 11msec half sine wave, 3 axis both directions |

Outline Drawing:

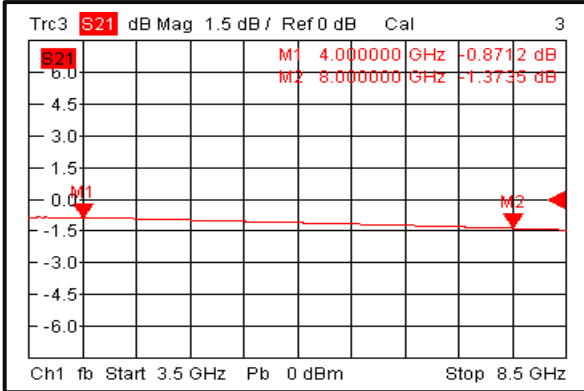
All Dimensions in mm (inches) Housing Tolerances ±0.1 (0.004)

The drawing shows three views of the component: a top view, a side view, and a detail view of the top surface. Dimensions are provided in millimeters and inches in brackets. The top view shows a rectangular component with two SMA connectors (J0 and J1) on the right side and four control pins (+5V, -5V, TTL, GND) on the bottom. The side view shows the component's height and the location of the SMA connectors. The detail view shows the top surface with the SMA connectors and control pins, and a 6-ø2 THRU hole.

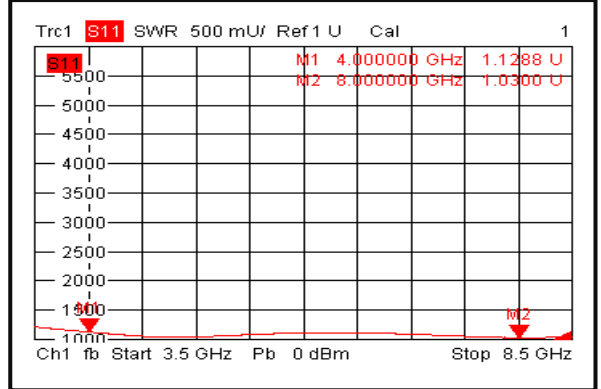
| TTL Control Voltage THRESHOLD | Low(0)=0~0.8V |
|--------------------------------------------------|----------------|
| | High(1)=2.8~5V |
| Control Input TTL | State |
| 1 | J0-J1 |
| 0 | J0-J2 |
| Control Pin Customization available upon request | |



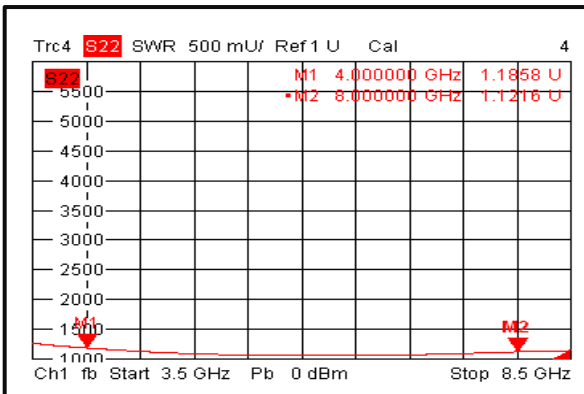
Insertion Loss @+25°C



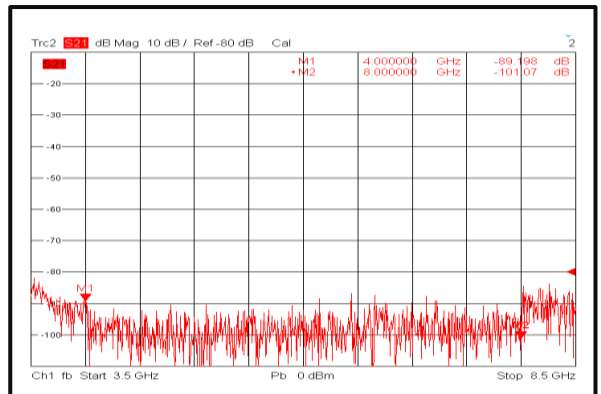
Input VSWR @+25°C



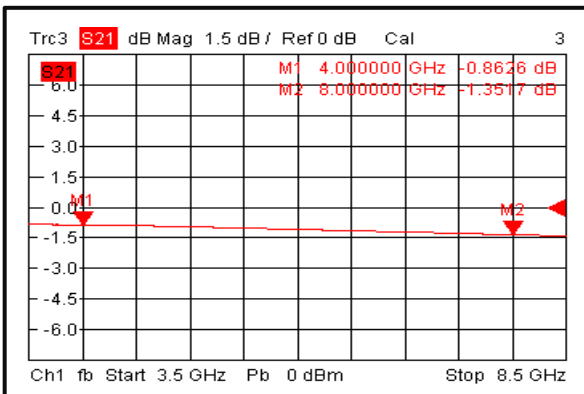
Output VSWR @+25°C



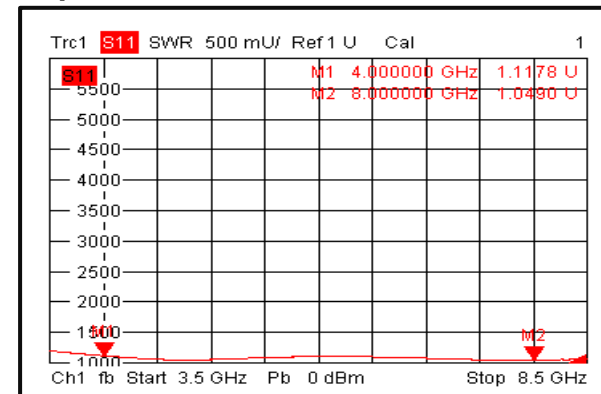
Isolation @+25°C



Insertion Loss @-40°C

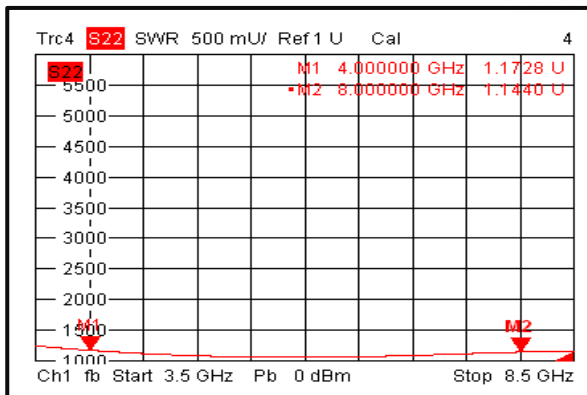


Input VSWR @-40°C

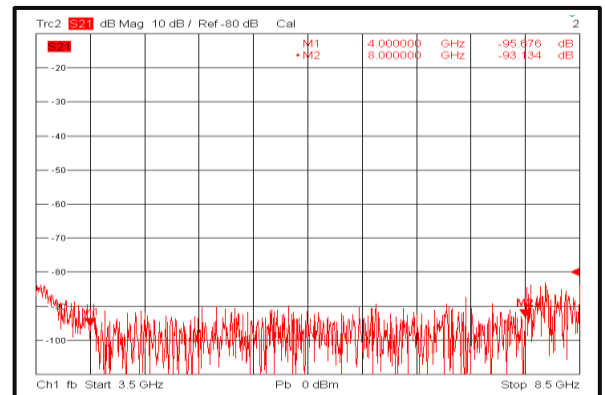




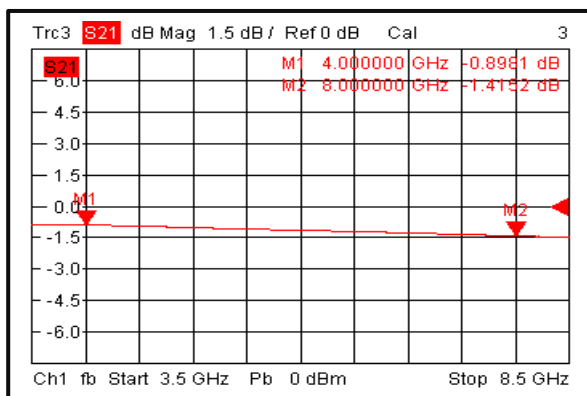
Output VSWR @-40°C



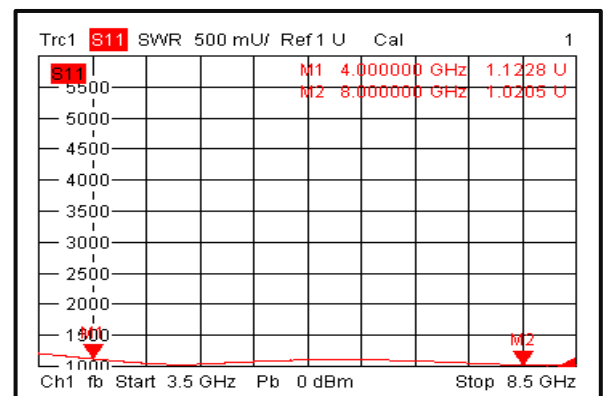
Isolation @-40°C



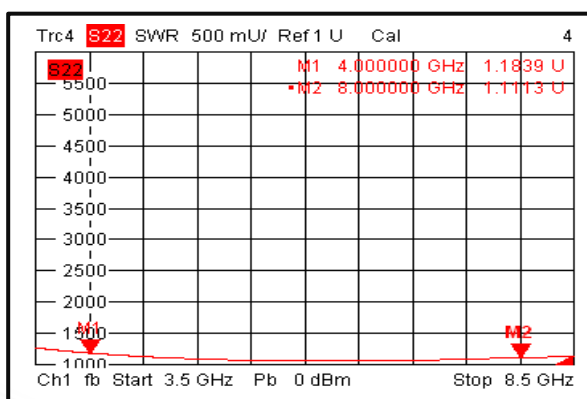
Insertion Loss @+85°C



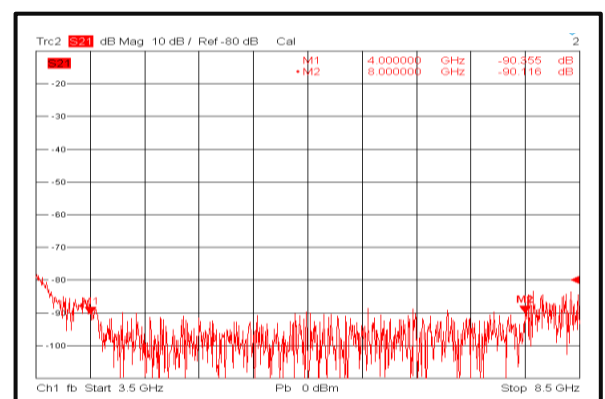
Input VSWR @+85°C



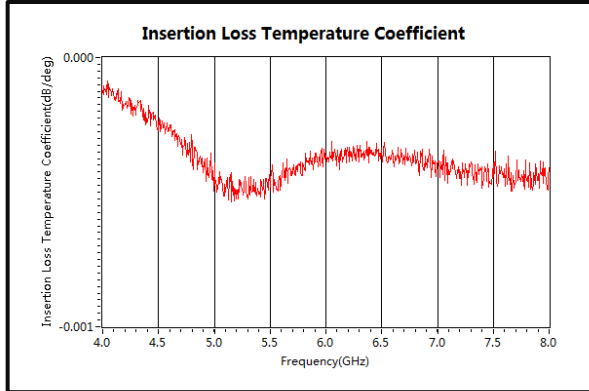
Output VSWR @+85°C



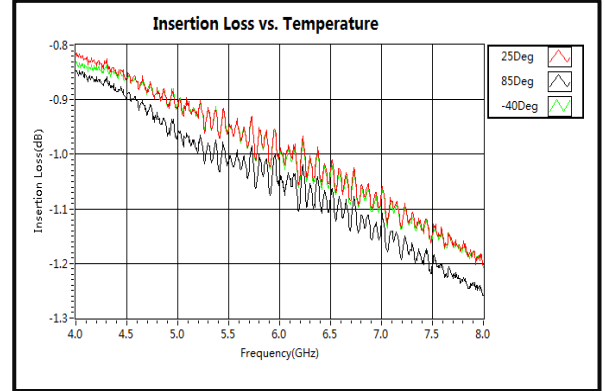
Isolation @+85°C



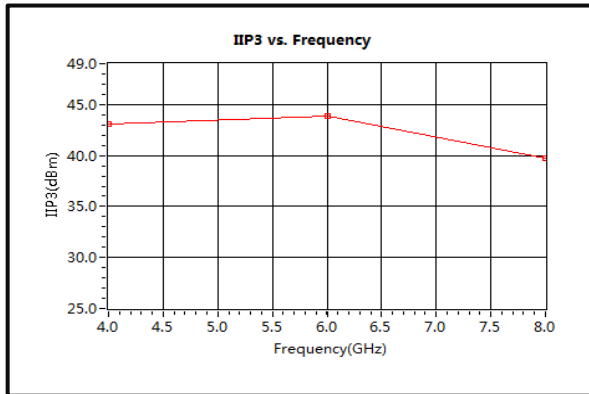
Insertion Loss Temperature Coefficient



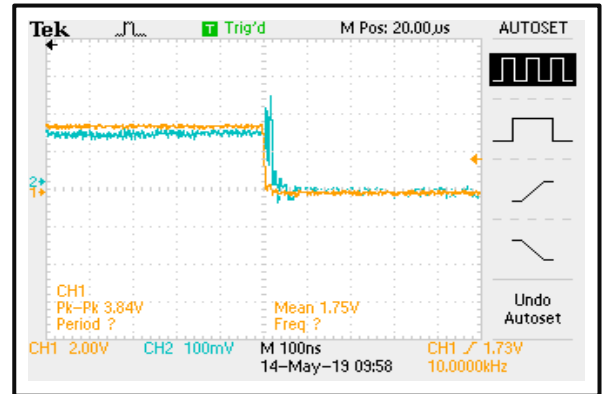
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed

